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EXAMINER
TO, JENNIFER N

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/666,418	LILLIEBJERG, ERIK
	Examiner	Art Unit	
	JENNIFER N. TO	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>14 November 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>2-7,9-14 and 16-23</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>2-7,9-14 and 16-23</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 2-7, 9-14, and 16-23 are pending for examination. Claims 1, 8, and

15 are canceled by applicant. This office action is responding to applicant reply

filed 11/14/2008.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   Claims 2-5, and 9-12 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly

claim the subject matter which applicant regards as the invention.

     a.   The claim language in the following claims is not clearly

understood:

          i.   as per claim 2, line 10, it is not clearly understood what is

meant by "designating said executing task a waiting task" (i.e.

designating said executing task as a waiting task). Lines 13-14, it

is not clearly understood what is meant by "designating said waiting

task an interrupted task" (i.e. designating said waiting task as an

interrupted task). Line 17, it is not clearly understood what is meant

by "designating said executing task an interrupted task" (i.e.

designating said executing task as an interrupted task).

ii.   as per claim 9, it has the same deficiency as claim 2 above.

Appropriate correction is required.

iii.   as per claims 3-5, and 10-12, they are rejected for

incorporating the above errors from their respective parent claims

by dependency.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by

Shi et al. (hereafter Shi) (U.S. Patent No. 6757897).

6.   Shi was cited in the previous office action.

7.   As per claim 21, Shi teaches the invention as claim including a method of

executing a plurality of tasks of different priority values (abstract, lines 1-5; col. 3,

lines 66-67), said method comprising:

utilizing preemptive multitasking and cooperative multitasking in execution of said tasks (abstract; col. 11, line 54 through col. 12, line 10);

while a task is executing, receiving a request for a particular waiting period from said task (abstract; col. 3, line 65 through col. 4, lines 13);

for duration of said particular waiting period, suspending execution of said task (col. 4, lines 13-16); and

selecting a next task to execute based on said priority values of said tasks and based on status designations representative of execution progress of said tasks (col. 12, lines 44-47), wherein said preemptive multitasking and said cooperative multitasking increase utilization of processing power of a processor and ensure higher priority valued tasks are executed with less interruption time than lower priority valued tasks ((Shi teaches utilizing preemptive multitasking and cooperative multitasking, and it is well know in the art that using preemptive and cooperative multitasking would increase utilization of processing power of a processor and ensure higher priority valued tasks are executed with less interruption time than lower priority valued tasks. Thus, Shi inherently teaches this limitation).

8.   As per claim 22, it is a computer-readable medium claim that corresponding to method claim 21. Therefore, it is rejected for the same reason as method claim 21 set forth above.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described

as set forth in section 102 of this title, if the differences between the subject matter sought to be

patented and the prior art are such that the subject matter as a whole would have been obvious at the

time the invention was made to a person having ordinary skill in the art to which said subject matter

pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 2-5, and 9-12 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Shi et al. (hereafter Shi) (U.S. Patent No. 6757897).

11.   As per claim 2, Shi teaches the invention substantially as claimed in claim

21 above including:

selecting a task from said tasks based on said priority values and said

status designations, wherein said status designations include executing, waiting,

and completed (fig. 3, step 400, col. 14, lines 14-33);

starting said selected task and designating said selected task an

executing task (fig. 3, step 400, col. 14, lines 14-33);

if said executing task requests a waiting period, suspending said

executing task and designating said executing task a waiting task and repeating

said selecting said task and said staring said selected task (fig. 3, step 401; col.

14, lines 34-53; col. 22, lines 37-62);

if said waiting period elapses for any waiting task and said executing task

has a higher priority value than said waiting task, and allowing said executing

task to continue execution (col. 23, lines 18-31);

if said waiting period elapses for any waiting task and said executing task

does not have a higher priority value than said waiting task, suspending said

executing task and repeating said selecting task and said starting said selected

task (col. 23, line 36 through col. 24, line 25); and

if said executing task completes execution, designating said executing

task a completed task and repeating said selecting said task and said starting

said selected task (col. 22, line 30 through col. 23, line 24).

12.   Shi did not specifically teach in details that the status designation include

interrupt and un-start, designating waiting task as an interrupted task, and

designating executing task as an interrupted task.

13.   However, Shi's system capable of designating (setting) the status of the

task once their execution stages is change (col. 22, lines 40-52; col. 23, lines 27-

35). It would have been obvious to one of an ordinary skill in the art at the time

the invention was made to try to modify Shi's designating step to included

interrupt and un-start statuses as well as designating task to be interrupted task if

the task being interrupted to thereby produce a system that scheduling tasks

based on the priority and status of the task as suggested in Shi (col. 12, lines 45-

47).

14.   As per claim 3, Shi teaches that wherein said selecting said task includes selecting higher priority values before selecting lower priority values when possible (col. 23, line 45 through col. 24, line 23).

15.   As per claim 4, Shi teaches that wherein said selecting said task includes if a first particular task cannot be executed until a second particular task has completed execution, enabling selection of said first particular task after said second particular task has completed execution (col. 23, line 45 through col. 24, line 23).

16.   As per claim 5, Shi further teaches setting a timer based on said waiting period (col. 14, lines 40-42, setting internal timer).

17.   As per claim 9-12, they are a computer-readable medium claims that corresponding to method claims 2-5. Therefore, it is rejected for the same reason as method claims 2-5 set forth above.

18.   Claims 6-7, 13-14, and 16-20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shi et al (hereafter Shi) (U.S. Patent No. 6757897), as applied in claims 21 and 22 above, and in view of Abgrall (U.S. Patent No. 6401202).

19.   As per claim 6, Shi teaches the invention substantially as claimed in claim

21 above. Shi did not specifically teach tasks are BIOS initialized tasks.

20.   However, Abgrall teaches tasks are BIOS initialized tasks (abstract; col. 1,

lines 6-7; col. 2, lines 31-32; col. 11, lines 21-25).

21.   It would have been obvious to one of an ordinary skill in the art at the time

the invention was made to have combined the teaching of Shi and Abgrall

because Shi suggested that the tasks can be any type of tasks in any type of

computing device (col. 25, lines 2-3), and Abgrall teaching of tasks are BIOS

initialized tasks would improved the integrity of Shi's system by extending the

usability of Shi's system into perform multitasking during BIOS boot-up (Abgrall,

col. 1, lines 62-63).

22.   As per claim 7, Abgrall teaches BIOS kernel receives said request for said

particular waiting period (col. 11, lines 30-34).

23.   As per claim 13-14, they are a computer-readable medium claims that

corresponding to method claims 6-7. Therefore, it is rejected for the same

reason as method claims 6-7 set forth above.

24.   As per claim 23, Shi teaches the invention substantially as claim including

a system comprising:

a processor (fig. 1, item 101); and

the system operative to utilize preemptive multitasking and cooperative multitasking to increase utilization of processing power of said processor and to ensure higher priority valued tasks are executed with less interruption time than lower priority valued tasks (Shi teaches utilizing preemptive multitasking and cooperative multitasking, and it is well know in the art that using preemptive and cooperative multitasking would increase utilization of processing power of a processor and ensure higher priority valued tasks are executed with less interruption time than lower priority valued tasks. Thus, Shi inherently teaches this limitation) when executing a plurality of tasks of different priority values (col. 25, lines 4-5), and wherein the system is operative to receive a request for a particular waiting period from a task while said task is executing (abstract; col. 3, line 65 through col. 4, lines 13), wherein said system is operative to suspend execution of said task for a duration of said particular waiting period (col. 4, lines 13-16), and wherein said system is operative to select a next task to execute based on said priority values of said tasks and based on status designations representative of execution progress of said tasks (col. 12, lines 44-47).

25.   Shi did not specifically teach the system is BIOS, and tasks are BIOS initialized tasks.

26.   However, Abgrall teaches the system is BIOS, and tasks are BIOS

initialized tasks (abstract; col. 1, lines 6-7; col. 2, lines 31-32; col. 11, lines 21-

25).

27.   It would have been obvious to one of an ordinary skill in the art at the time

the invention was made to have combined the teaching of Shi and Abgrall

because Shi suggested that the tasks can be any type of tasks in any type of

computing device (col. 25, lines 2-3), and Abgrall teaching of tasks are BIOS

initialized tasks would improved the integrity of Shi's system by extending the

usability of Shi's system into perform multitasking during BIOS boot-up (Abgrall,

col. 1, lines 62-63).

28.   As per claim 16, Shi teaches wherein said selecting said task includes

selecting higher priority values before selecting lower priority values when

possible (col. 23, line 45 through col. 24, line 23).

29.   As per claim 17, Shi teaches that wherein said selecting said task includes

if a first particular task cannot be executed until a second particular task has

completed execution, enabling selection of said first particular task after said

second particular task has completed execution (col. 23, line 45 through col. 24,

line 23).

30.   As per claim 18, Shi further teaches a timer (col. 14, lines 40-42).

31.   As per claim 19, Abgrall teaches wherein said BIOS includes a BIOS
kernel for receiving requests for said particular waiting period from said initialized
tasks (col. 11, lines 30-34).

32.   As per claim 20, Abgrall further teaches a plurality of hardware
components (fig. 2).

Response to Arguments

33.   Applicant's arguments with respect to claims 2-7, 9-14, and 16-23 have
been considered but are moot in view of the new ground(s) of rejection.

Conclusion

34.   The prior art made of record and not relied upon is considered pertinent to
applicant's disclosure (see PTO 892 form for details).

35.   Applicant's amendment necessitated the new ground(s) of rejection
presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.
See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as
set forth in 37 CFR 1.136(a).

       A shortened statutory period for reply to this final action is set to expire
THREE MONTHS from the mailing date of this action. In the event a first reply is
filed within TWO MONTHS of the mailing date of this final action and the advisory
action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

36.　　　Any inquiry concerning this communication or earlier communications from

the examiner should be directed to JENNIFER N. TO whose telephone number is

(571)272-7212. The examiner can normally be reached on M-T 6AM- 3:30 PM,

F 6AM- 2:30 PM.

37.　　　If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax

phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

38.　　　Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public

PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/   /Jennifer N. To/
Supervisory Patent Examiner, Art Unit 2195   Patent Examiner
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